

Occupational Exposure to Hazardous Chemicals in Laboratories

These questions are based on 29 CFR 1910.1450, "*Occupational Exposure to Hazardous Chemicals in Laboratories.*" Letters and numbers in parentheses refer to those sections of 29 CFR 1910.1450.

Complete this section if you work with any select agent toxin. If work with a select agent toxin also involves work with viable organisms or recombinant DNA, refer to instructions for completion of other portions of this application package.

Please circle the response that best describes the laboratory in which work with select agents will be carried out.

N.A. = not applicable. If you mark "N.A." please provide a brief explanation below that item or on a separate page.

29 CFR 1910.1450

(a) Scope and application.

(b) Definitions

(c) Permissible exposure limits.

~~Yes No NA~~ — ~~For laboratory uses of OSHA regulated substances, the employer shall assure that laboratory employees' exposures to such substances do not exceed the permissible exposure limits specified in 29 CFR part 1910, subpart Z.~~

(d) Employee exposure determination.

~~Yes No NA~~ — ~~(1) Initial monitoring. The employer shall measure the employee's exposure to any substance regulated by a standard which requires monitoring if there is reason to believe that exposure levels for that substance routinely exceed the action level (or in the absence of an action level, the PEL).~~

~~Yes No NA~~ — ~~(2) Periodic monitoring. If the initial monitoring prescribed by paragraph (d)(1) of this section discloses employee exposure over the action level (or in the absence of an action level, the PEL), the employer shall immediately comply with the exposure monitoring provisions of the relevant standard.~~

~~Yes No NA~~ — ~~(3) Termination of monitoring. Monitoring may be terminated in accordance with the relevant standard.~~

~~Yes No NA~~ — ~~(4) Employee notification of monitoring results. The employer shall, within 15 working days after the receipt of any monitoring results, notify the employee of these results in writing either individually or by posting results in an appropriate location that is accessible to employees.~~

(e) Chemical Hygiene plan - General.

- Yes No NA (1) Where hazardous chemicals as defined by this standard are used in the workplace, the employer shall develop and carry out the provisions of a written Chemical Hygiene Plan which is:
- Yes No NA (I) Capable of protecting employees from health hazards associated with hazardous chemicals in that laboratory and
- ~~Yes No NA (ii) Capable of keeping exposures below the limits specified in paragraph (c) of this section.~~
- Yes No NA (2) The Chemical Hygiene Plan shall be readily available to employees, employee representatives and, upon request, to the Assistant Secretary.
- Yes No NA (3) The Chemical Hygiene Plan shall include each of the following elements and shall indicate specific measures that the employer will take to ensure laboratory employee protection:
- Yes No NA (I) Standard operating procedures relevant to safety and health considerations to be followed when laboratory work involves the use of hazardous chemicals;
- Yes No NA (ii) Criteria that the employer will use to determine and implement control measures to reduce employee exposure to hazardous chemicals, including engineering controls, the use of personal protective equipment and hygiene practices; particular attention shall be given to the selection of control measures for chemicals that are known to be extremely hazardous;
- Yes No NA (iii) A requirement that fume hoods and other protective equipment are functioning properly and specific measures that shall be taken to ensure proper and adequate performance of such equipment;
- Yes No NA (iv) Provisions for employee information and training as prescribed in paragraph (I) of this section;
- Yes No NA (v) The circumstances under which a particular laboratory operation, procedure or activity shall require prior approval from the employer or the employer's designee before implementation;
- Yes No NA (vi) Provisions for medical consultation and medical examinations in accordance with paragraph (g) of this section;
- Yes No NA (vii) Designation of personnel responsible for implementation of the Chemical Hygiene Plan, including the assignment of a Chemical Hygiene Officer and, if appropriate, establishment of a Chemical Hygiene Committee; and
- Yes No NA (viii) Provisions for additional employee protection for work with particularly hazardous substances. These include "select carcinogens," reproductive toxins and substances which have a high degree of acute toxicity. Specific consideration shall be given to the following provisions which shall be included where appropriate:
- Yes No NA (A) Establishment of a designated area;
- Yes No NA (B) Use of containment devices such as fume hoods or glove boxes;

- Yes No NA (C) Procedures for safe removal of contaminated waste; and
- Yes No NA (D) Decontamination procedures.
- Yes No NA (4) The employer shall review and evaluate the effectiveness of the Chemical Hygiene Plan at least annually and update it as necessary.
- (f) Employee information and training.
- Yes No NA (1) The employer shall provide employees with information and training to ensure that they are apprised of the hazards of chemicals present in their work area.
- Yes No NA (2) Such information shall be provided at the time of an employee's initial assignment to a work area where hazardous chemicals are present and prior to assignments involving new exposure situations. The frequency of refresher information and training shall be determined by the employer.
- Yes No NA (3) Information. Employees shall be informed of:
- Yes No NA (i) The contents of this standard and its appendices which shall be made available to employees;
- Yes No NA (ii) The location and availability of the employer's Chemical Hygiene Plan;
- Yes No NA (iii) The permissible exposure limits for OSHA regulated substances or recommended exposure limits for other hazardous chemicals where there is no applicable OSHA standard;
- Yes No NA (iv) Signs and symptoms associated with exposures to hazardous chemicals used in the laboratory; and
- Yes No NA (v) The location and availability of known reference material on the hazards, safe handling, storage and disposal of hazardous chemicals found in the laboratory including, but not limited to, Material Safety Data Sheets received from the chemical supplier.
- Yes No NA (4) Training.
- Yes No NA (I) Employee training shall include:
- Yes No NA (A) Methods and observations that may be used to detect the presence or release of a hazardous chemical (such as monitoring conducted by the employer, continuous monitoring devices visual appearance or odor of hazardous chemicals when being released, etc.);
- Yes No NA (B) The physical and health hazards of chemicals in the work area; and
- Yes No NA (C) The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.
- Yes No NA (D) The employee shall be trained on the applicable details of the employer's written

Chemical Hygiene Plan.

(g) Medical consultation and medical examinations.

- Yes No NA (1) The employer shall provide all employees who work with hazardous chemicals an opportunity to receive medical attention, including any follow-up examinations which the examining physician determines to be necessary, under the following circumstances:
- Yes No NA (I) whenever an employee develops signs or symptoms associated with a hazardous chemical to which the employee may have been exposed in the laboratory, the employee shall be provided an opportunity to receive an appropriate medical examination.
- Yes No NA (ii) where exposure monitoring reveals an exposure level routinely above the action level (or in the absence of an action level, the PEL) for an OSHA regulated substance for which there are exposure monitoring and medical surveillance requirements, medical surveillance shall be established for the affected employee as prescribed by the particular standard.
- Yes No NA (iii) whenever an event takes place in the work area such as a spill, leak, explosion or other occurrence resulting in the likelihood of a hazardous exposure, the affected employee shall be provided an opportunity for a medical consultation. Such consultation shall be for the purpose of determining the need for a medical examination.
- Yes No NA (2) All medical examinations and consultations shall be performed by or under the direct supervision of a licensed physician and shall be provided without cost to the employee, without loss of pay and at a reasonable time and place.
- Yes No NA (3) Information provided to the physician. The employer shall provide the following information to the physician:
- Yes No NA (I) The identity of the hazardous chemical(s) to which the employee may have been exposed;
- Yes No NA (ii) A description of the conditions under which the exposure occurred including quantitative exposure data, if available; and
- Yes No NA (iii) A description of the signs and symptoms of exposure that the employee is experiencing, if any.
- Yes No NA (4) Physician's written opinion.
- Yes No NA (I) For examination or consultation required under this standard, the employer shall obtain a written opinion from the examining physician which shall include the following:
- Yes No NA (A) Any recommendation for further medical follow-up;
- Yes No NA (B) The results of the medical examination and any associated tests;
- Yes No NA (C) Any medical condition which may be revealed in the course of the examination which may place the employee at increased risk as a result of exposure to a hazardous chemical found in the workplace; and

Yes No NA (D) A statement that the employee has been informed by the physician of the results of the consultation or medical examination and any medical condition that may require further examination or treatment.

Yes No NA (ii) The written opinion shall not reveal specific findings of diagnoses unrelated to occupational exposure.

(h) Hazard identification.

Yes No NA (1) With respect to labels and material safety data sheets:

Yes No NA (I) Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced.

Yes No NA (ii) Employers shall maintain any material safety data sheets that are received with incoming shipments of hazardous chemicals, and ensure that they are readily accessible to laboratory employees.

Yes No NA (2) The following provisions shall apply to chemical substances developed in the laboratory:

Yes No NA (I) If the composition of the chemical substance which is produced exclusively for the laboratory's use is known, the employer shall determine if it is a hazardous chemical as defined in paragraph (b) of this section. If the chemical is determined to be hazardous, the employer shall provide appropriate training as required under paragraph (f) of this section.

Yes No NA (ii) If the chemical produced is a byproduct whose composition is not known, the employer shall assume that the substance is hazardous and shall implement paragraph (e) of this section.

Yes No NA (iii) If the chemical substance is produced for another user outside of the laboratory, the employer shall comply with the Hazard Communication Standard (29 CFR 1910.1200) including the requirements for preparation of material safety data sheets and labeling.

(I) Use of respirators.

Yes No NA Where the use of respirators is necessary to maintain exposure below permissible exposure limits, the employer shall provide, at no cost to the employee, the proper respiratory equipment. Respirators shall be selected and used in accordance with the requirements of 29 CFR 1910.134.

(j) Record keeping.

Yes No NA (1) The employer shall establish and maintain for each employee an accurate record of any measurements taken to monitor employee exposures and any medical consultation and examinations including tests or written opinions required by this standard.

Yes No NA (2) The employer shall assure that such records are kept, transferred, and made available in accordance with 29 CFR 1910.20.

(k) Dates.

(l) Appendices.